

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for isolating a hybrid device in an image sensor, ~~including a photodiode~~, the method comprising: ~~the steps of:~~

forming sequentially a pad oxide layer and a pad nitride layer on a substrate and selectively removing a portion of the pad oxide layer and a first portion of the pad nitride layer to expose a surface of the substrate ~~[[in]]~~ on which a field insulation layer will be formed;

forming ~~the field insulation layer~~ a first ion-implantation region by performing a first channel-stop ion-implantation process ~~[[to]]~~ on the exposed surface of the substrate ~~with use of using the remaining pad nitride layer that exists after removal of the first portion of the pad nitride layer~~ as a first mask;

performing a thermal oxidation process to form the field insulation layer on the exposed surface of the substrate;

removing a ~~partial~~ second portion of the pad nitride layer so that ~~[[one]]~~ a side of the remaining pad nitride layer that exists after removal of the second portion of the pad nitride layer is spaced out ~~with a predetermined distance from an edge of the field insulation layer;~~ apart from an edge of the field insulation layer by a distance; and

forming a second ion-implantation region by performing an additional a second ion-implantation process ~~onto on the exposed substrate surface and~~ the field insulation layer ~~[[by]]~~ using the remaining pad nitride layer that exists after removal of the second portion of the pad nitride layer as a second mask.

Claim 2 (currently amended): The method as recited in claim 1, wherein~~[[,]]~~ at the step of removing the portion of the pad nitride layer is performed in a manner that the pad nitride layer is spaced out with the predetermined distance from the edge of the field insulation layer, the predetermined the distance ranges from about 0.5 μm to about 1.0 μm .

Serial No.: 10/616,155
Group Art Unit: 2811

Claim 3 (currently amended): The method as recited in claim 1, wherein at least one of the ~~[[ion- implantation]]~~ first ion-implantation process and the second ion-implantation process is performed ~~with use of~~ using boron.

Claim 4 (currently amended): The method as recited in claim 3, wherein the at least one of the boron first ion-implantation process and the second ion-implantation process using boron ~~is proceeded by employing~~ employs an ion-implantation energy of about 30 keV and dose amounts of boron in a range between about $4.0 \times 10^{13} \text{ cm}^{-3}$ to about $5.0 \times 10^{13} \text{ cm}^{-3}$.